

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
5 August 2004 (05.08.2004)

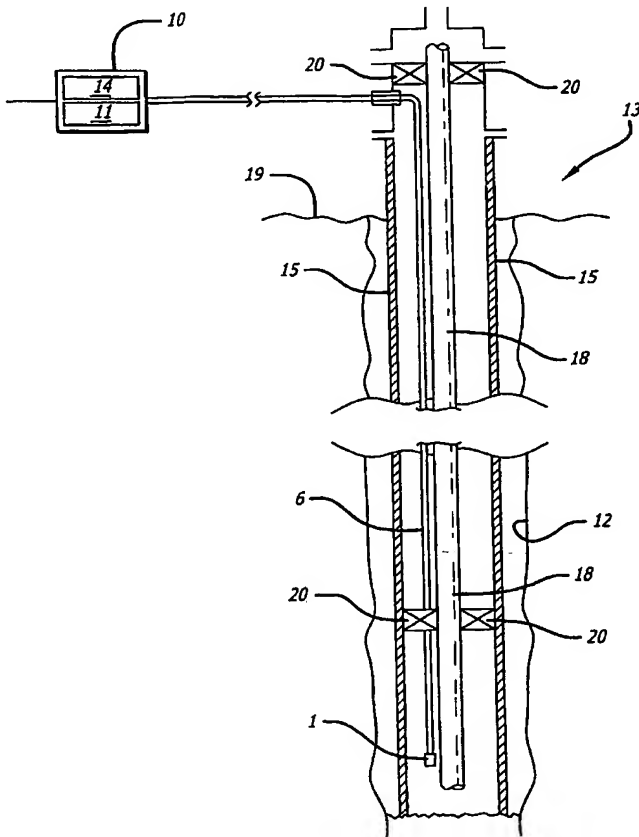
PCT

(10) International Publication Number  
**WO 2004/066000 A2**

- (51) International Patent Classification<sup>7</sup>: **G02B** L. [US/US]; 27521 North Cunningham Dr., Valencia, CA 91354 (US). SHAW, Michael [—/CA]; Calgary (CA).
- (21) International Application Number: PCT/US2004/000947 (74) Agents: FITZGERALD, John, K. et al.; Fulwider Patton Lee & Utech, LLP, Howard Hughes Center, 6060 Center Drive, Tenth Floor, Los Angeles, CA 90045 (US).
- (22) International Filing Date: 15 January 2004 (15.01.2004)
- (25) Filing Language: English (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (26) Publication Language: English
- (30) Priority Data: 60/440,255 15 January 2003 (15.01.2003) US
- (71) Applicant (for all designated States except US): SABEUS PHOTONICS, INC. [US/US]; 20630 Nordhoff Street, Chatsworth, CA 91311 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BOWKER, Thomas [—/US]; Chatsworth California (US). GOLDNER, Eric, (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DEPLOYING AN OPTICAL FIBER IN A WELL



(57) Abstract: A fiber optic sensor assembly capable of deployment down an instrumentation tube located in a well bore, including a flexible protective tube having a lumen encasing an optical fiber having a core portion and a cladding portion disposed within the flexible tube. The flexible protective tube protects the optical fiber from the oil, water or hydrogen gas within the well bore. A method of deploying the optical fiber down the well bore, is also provided. An optical fiber having a core and a cladding surrounded by the flexible protective tubing is deployed into the lumen of a tube disposed within the well bore by pumping a high pressure fluid into the lumen of the tube, thereby causing the deployment of the optical fiber down the well bore. The protective tubing is impermeable of hydrogen and other corrosive materials.



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— without international search report and to be republished upon receipt of that report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*